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18.12.65

S/137/62/COO/010/015/028

A052/A101

AUTHORS: Rybakov, Ye. I., Pomicheva, N. A.

TITLE: Application of titanium and its alloys as corrosion-resisting materials in titanium dioxide production

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 10, 1962, 87, abstract 101573 ("Lakokrasochn. materialy i ich primeneniye", no. 2, 1962, 60 - 62)

TEXT: Tests of Ti and its alloys were carried out in media specific for TiO_2 production, where the concentration of H_2SO_4 varies from 20 to 94% and the temperature ranges from 10 to 220°C. To stable alloys belongs Ti and its alloys with 3% Al + 2% V and with 4% Al + 2% V. No traces of corrosion were detected on microsections of these alloys either on the grain boundaries or on the surface of the samples. The increase of the weight during the test results obviously from the formation of an oxide film, which has a good adhesion with the base metal and is insoluble in H_2SO_4 , HNO_3 and HCl. Welded seams on Ti do not corrode. It is shown that σ_{cr} decreases slightly after corrosion tests but the

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Application of titanium and its...

rupture takes place not along the welded seam. Microstructure investigations have shown that corrosion of unstable alloys has a "pitting" character and penetrates sometimes into a sample up to 20 mm deep. The corrosion of side surfaces has a "fibrous" character. As a characteristic feature it should be pointed out that during the first 10 - 40 hours the corrosion takes a slow course, and thereafter its rate increases sharply.

N. Sladkova

[Abstracter's note: Complete translation]

Card 2/2

FOMICHEYA, N. I.		7	
<p> Rapid method for the determination of hydrocyanic acid in air. N. I. Fomicheva. <i>Zashchita Lab.</i> 13, 172-4 (1947) (in Russian).—To prep. a reagent for HCN, mix equal vols. of (A) a soln. of 0.2 g. benzidine in 100 ml. H₂O, heated with a few drops of AcOH, and (B) a 0.3% soln. of Cu acetate; stir 20 g. silica gel of 0.5-1 mm. grain size into 1.5 ml. liquid, and dry. The reagent should be used within a few hrs. after prepn. Owing to rapid change of the color, comparison standards are preferably prepd. in water colors on paper; air should be sucked through the silica at a rate of 600-700 ml./min. The method is suitable for the detn. of 0.0004-0.05 mg. HCN/l. N. Thom </p>			
ASD-16A METALLURGICAL LITERATURE CLASSIFICATION			
SEARCHED BY		INDEXED BY	
SERIALIZED BY		FILED BY	
JAN 1948		JAN 1948	

15A

Use of DDT and benzene hexachloride for insect control in railroad cars. P. I. Nikitin and N. I. Fomicheva. *Gigiena i Sanit.* 1949, No. 11, 48-51.—Bedbugs are effectively eliminated by spraying with 5% DDT benzene for long-type trains, but not in those used for short hauls. Benzene hexachloride dusts (5-7%) are more effective than 10% DDT dusts. G. M. Kosolapoff

POMICHEVA, N.I.

NIKITIN, P.I.; POMICHEVA, N.I.

Results of application of insecticide oil paint in railroad coaches.
Gig.sanit., Moskva No.2:54-55 Feb 51. (CLML 20:6)

1. Of Kirov Institute of Epidemiology and Microbiology.

POMICHEVA, N. I.; MEL'NIKOVA, P. A.

Rapid determination of small quantities of dimethylaniline in
air. Gig. sanit. Moskva no. 5:49-52 May 1952. (GLML 22:3)

1. Of the All-Union Scientific-Research Institute for the Protection
of Labor, VTsSPS.

FOMICHEVA, N.I.

Determination of small quantities of DDT on surfaces painted with
oil paints and lacquers. Gig. sanit., Moskva no.12:51-52 Dec 1952.
(GIML 23:4)

1. Of the Central Scientific-Research Laboratory of Hygiene and
Epidemiology of the Ministry of ~~Ways~~ of Communication USSR.

R.R. TRANSPORT

FOMICHEVA, N.I., kand.biol.nauk

Determination of active chlorine on surfaces treated with chloramine solutions for disinfection. Gig. i san. 23 no.9:78-81 S '58

(MIRA 11:11)

1. Iz Tsentral'noy nauchno-issledovatel'skoy laboratorii gigiyeny i epidemiologii Ministerstva puty soobshcheniya SSSR.
(CHLORAMINE,

determ. of active chlorine on surfaces treated with chloramine disinfect. (Rus))

NIKITIN, P.I.; FOMICHEVA, N.I.

Concerning D.F. Lazikov's and V.IA. Raigorodskaya's comments on
P.I. Nikitin and N.I. Fomicheva's article on "Testing 'Cyclone'
preparations for killing insects in passenger cars." Gig. i
san. 24 no.6:65-66 Je '59. (MIRA 12:8)
(HYDROCYANIC ACID) (INSECTICIDES)

POMICHEVA, N.I.

Reproduction of the (Castor fiber L.) Biol. MOIP. Otd. biol. 64
no.3:5-15 My-Je '59. (MIRA 13:3)
(White Russia--Beavers)

RUKOVSKIY, N.N., FOMICHEVA, N.I.

Relationship between the beaver and the otter. Biul. MOIP. Otd. biol.
65 no.5:102-105 8-0 '60. (MIRA 13:12)
(SOZH VALLEY--BEAVERS) (SOZH VALLEY--OTTERS)

NIKITIN, P.I.; LUNEVA, K.K.; FOMICHEVA, N.I.

Disinfection of surfaces with small doses of disinfectants
applied by means of pneumatic atomizers. Zhur.mikrobiol., epid.
i immun. 33 no.8:30-34 Ag '62. (MIRA 15:10)

1. Iz Vsesoyuznogo nauchno-issledovatel'skogo instituta
zheleznodorozhnoy gigiyeny Ministerstva putey soobshcheniya.
(DISINFECTION AND DISINFECTANTS) (AEROSOLS)

PILIPCHUK, N.S., dotsent; FOMICHEVA, N.I.

Change in external respiration following lung resection in
tuberculosis. Vrach delo no.273-78 F'64 (MIRA 17:4)

1. Kafedra tuberkuleza Kiyevskogo meditsinskogo instituta.

7

PILIPCHUK, N.S., doktor med. nauk; FOMICHEVA, N.I.

Role of pneumoperitoneum in resection of the lungs in tuberculosis.
Prob. tub. no.1:21-26 '65. (MIRA 18:12)

1. Kafedra tuberkuloza (zav. N.S. Pilipchuk) Kiyevskogo
meditsinskogo instituta.

ACC NR: AP700387C

(N)

SOURCE CODE: UR/0133/67/000/001/0039/0041

AUTHOR: Fomicheva, N. P.; Klyuyev, M. M.; Topilin, V. V.; Tuchkevich, N. M.;
Doronin, V. M.; Dzugutov, M. Ya.; Terekhov, K. I.; Mikhin, T. A.

ORG: none

TITLE: Electroslog remelting of EI481 chromium-manganese-nickel heat resistant steel

SOURCE: Stal', no. 1, 1967, 39-41

TOPIC TAGS: ~~chromium manganese nickel~~ ^{CHROMIUM MANGANESE STEEL, NICKEL STEEL,} steel, heat resistant steel, steel melting,
electroslog melting, steel composition, steel mechanical property/EI481 steel

ABSTRACT:

Cast EI481 high-alloy heat-resistant steel (0.34—0.40% C, 7.5—9.5% Mn, 11.5—13.5% E, 7.0—9.0% Ni, 1.1—1.4% Mo, 0.25—0.45% Nb, 1.3—1.6% V, 0.3—0.8% Si) was electroslog remelted under four different slags and tested for chemical composition, nonmetallic inclusions and mechanical properties. The best results were obtained with the use of standard or with 10% lime No. 4 slag of the CaF_2 -CaO system. In all cases, electroslog remelting changed only slightly the steel composition. It decreased the content of manganese by 0.04—0.20 abs.% and of vanadium by 0.08 abs.%; the sulfur content decreased by 20—40%, but no substantial decrease was observed in the hydrogen and oxygen contents. The electroslog remelting also decreased

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UDC: 669.187.26

ACC NR: AP7003870

the content of nonmetallic inclusions from 98.7 to 52.3·10⁻⁴% and resulted in more uniform distribution. No significant changes were observed in the mechanical properties of the electroslog remelted metal (all were above the technical requirements) but the anisotropy of the ductility characteristics decreased by 20—40%. In stress-rupture tests at 650C under a stress of 38 kg/mm², the steel remelted under No. 4 slag failed after 156 hr compared with 35 hr required for conventionally melted steel. Forged parts from electroslog remelted steel had a tensile strength of 112.0—104.0 kg/mm², a yield strength of 74.0—83.7 kg/mm², an elongation of 19.2—24.0%, a reduction of area of 31.2—43.9% and an impact toughness of 4.5—5.5 kg·m/cm². The corresponding figures for forgings of conventionally melted EI481 steel were 60 and 85 kg/mm², 15 and 20%, and 2.5 kg·m/cm². The electroslog remelting of EI481 steel can be recommended for increasing the service life of parts made from this steel. Orig. art. has: 2 tables.

[MS]

SUB CODE: 11/ SUBM DATE: none/ ORIG REF: 002/ ATD PRESS: 5115

Card 2/2

FOMICHEVA, N. V.

"Investigation of the Process of Strengthening Aluminum Alloys by the Method of Shot Peening." Sub 11 Jun 51, Moscow Order of Lenin Aviation Inst imeni Sergo Ordzhonikidze

Dissertations presented for science and engineering degrees in Moscow during 1951.

SC: Sum. No. 480, 9 May 55

S/190/62/004/CO4/010/019
B117/B138

5.7100
15.8050
AUTHORS:

Tsvetkov, V. N., Klenin, S. I., Frenkel', S. Ya., Fomicheva,
O. V., Zhuze, A. G.

TITLE:

Hydrodynamic properties of poly- β -vinyl naphthalene macro-
molecules in benzene

PERIODICAL:

Vysokomolekulyarnyye soyedineniya, v. 4, no. 4, 1962, 540-545

TEXT: Diffusion constants, sedimentation coefficients and intrinsic viscosity of 10 fractions of poly- β -vinyl naphthalene (P- β -VN) in benzene were studied. The Mark - Kuhn - Houwink relations in this solvent were found to have the form $D = 3.5 \cdot 10^{-4} \cdot M_{S,D}^{-0.57}$ for the diffusion coefficient, and $[\eta] = 6.6 \cdot 10^{-5} \cdot M_{S,D}^{0.71}$ for the intrinsic viscosity. The molecular weight $M_{S,D}$ was determined from Svedberg's equation. The hydrodynamic behavior of P- β -VN, which is determined by viscosity and diffusion, is completely normal and confirms the universal character of the empirical constant $A = \eta_0 D (M[\eta])^{1/3} T^{-1}$. It's mean value was $(3.1 \pm 0.1) \cdot 10^{-10}$ erg/degree. This

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Hydrodynamic properties of ...

corresponded to the value of this constant determined for other polymers and again confirmed the usual correlation of hydrodynamic properties of P-β-VN during translation and rotation. The estimate of the relation between dimensions of P-β-VN molecules in benzene and their dimensions during free rotation $(\bar{h}^2)_0^{1/2}(\bar{h}^2)_f^{1/2}$, which characterizes the hardness of the molecular structure, made by means of the previously determined swelling parameter (Ref. 9: V. Ye. Eskin, K. Z. Korotkina, Vysokomolek. soyed., 2, 272, 1960) $\chi^3 = ([\eta] / [\eta]_0) = 1.2$, produced a mean value of 2.6. $((\bar{h}^2)_0^{1/2} = (\bar{h}^2)_D^{1/2} / \alpha$ are undisturbed dimensions of the macromolecule). This amount, which slightly exceeds the corresponding values for most of the linear polymers, showed (e. g. in comparison with polystyrene) that the substitution of the benzene ring by naphthalene increases the thermodynamic hardness of the macromolecule. It was found that the dependence of the diffusion coefficient D on the concentration of one of the P-β-VN fractions with $M = 3.5 \cdot 10^6$ is only slight in CCl_4 and more marked in benzene. This confirms that the dependence on the concentration is mainly determined by the thermodynamic interaction between polymer and solvent. (Ref. 13: V. N. Tsvetkov, S. I. Card 2/3

S/190/62/004/004/010/019
B117/B138

Hydrodynamic properties of ...

Klenin, Zh. tekhn. fiziki, 29, 1393, 1959). The quantity $A = \eta_0 D(M[\eta])^{1/3} T^{-1}$, calculated for the fraction investigation in CCl_4 , amounted to $3.50 \cdot 10^{-10}$ erg/degree, and was thus close to the mean value of the constant A. There are 4 figures and 2 tables. Two English-language references are: P. Debye, A. Bueche, J. Chem. Phys., 16, 573, 1948; P. J. Flory, Principles of Polym. Chem., New York, 1953.

ASSOCIATION: Institut vysokomolekulyarnykh soyedineniy AN SSSR (Institute of High-molecular Compounds AS USSR)

SUBMITTED: March 10, 1961

Card 3/3

FOMICHEVA, R.A., bibliograf

Readers' conference at the Ivanovo Peat Machinery Plant. Stroi.
i dor. mash. 6 no.5:39 My '61. (MIRA 1:6)
(Machinery industry--Periodicals)

FOMICHEVA, S.M.

Interrelation between the orientating reflex and analyzer interaction.
Vest. Mosk. un. Ser. 6: Biol., pochv. 16 no.1:3-10 Ja-F '61.

(MIRA 14:4)

1. Kafedra fiziologii vysshey nervnoy deyatel'nosti, elektrofiziologicheskaya laboratoriya Tsentral'nogo nauchno-issledovatel'skogo instituta sudebnoy psikiatrii imeni V.P.Serbskogo.

(SENSES AND SENSATION)

ZHDANOV, D.A. (Moskva, A-47, 5-ya Tverskaya-Yamskaya, ul.5, kv.12); FOMICHEVA,
T.D.

Andreas Vesalius and his painted portrait at the Hermitage Museum. Arkh.
anat., gist. 1 embr. 46 no.2:94-108 F '64. (MIRA 17:12)

1. Kafedra anatomii (zav. - chlen-korrespondent AMN SSSR prof. D.A. Zhdanov) 1-go Moskovskogo ordena Lenina meditsinskogo instituta imeni Sechenova i otdel zapadno-yevropeyskogo iskusstva Gosudarstvennogo Ermitazha v Leningrad. Adres Fomichevoy: Leningrad, Gosudarstvennyy Ermitazh, Otdel zapadnoyevropeyskogo iskusstva.

СЫТИСЛАВ, Ye.M.; ПОПОВА, I.I.; БЕЛЫХ, ...

Determination of the microquantities of sulfide ions Metod. anal.
khim. reak. 1 prepar. no.5/6:110-116 '63.

(MIRA 17:9)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut khimicheskikh
reaktivov osobo chistykh khimicheskikh veshchestv.

FOMICHEVA, T.V.

Development of generalization and abstraction in the process of
mastering the concepts of "subject" and "predicate." Vop.psikhol.
6 no.3:69-78 My-Je '60. (MIRA 14:5)

1. Kafedra pedagogiki i psikhologii Baryatskogo pedagogicheskogo
instituta.

(Children---Language)

FOMICHEVA, V. [Famichova, V.]

The paper mill in Dobrush. Rab. 1 sial. 34 no. 6:5-6 Je '58.
(MIRA 11:7)

(Dobrush--Paper industry)

ACC NR: AP6014724 (N) SOURCE CODE: UR/0186/65/007/006/0723/0729
 37
 AUTHOR: Vorob'yev, A. M.; Fomicheva, V. I. B
 ORG: none
 TITLE: Analytical determination of americium, plutonium, and uranium
 using AMP anion exchange resin 27 27 27
 SOURCE: Radiokhimiya, v. 7, no. 6, 1965, 728-729
 TOPIC TAGS: americium, plutonium, uranium, quantitative analysis, ion
 exchange resin
 ABSTRACT: The method described for the separation of americium,
 plutonium, and uranium using AMP ion exchange resin is based on the
 difference in the degree of sorption of ions of uranium (VI), plutonium
 (IV) and (III), and americium (III) from hydrochloric acid of different
 concentrations. The column used was a glass tube 6 cm long and 5 mm in
 diameter, with a drawn out end. In the determinations, a small amount
 of sulfuric acid does not interfere with the separation, but nitric acid
 must be eliminated, since it can promote the reduction of plutonium to
 the trivalent state. To this end, the solution being analyzed was
 evaporated to dryness, 10 ml of concentrated HCl was added to the
 Card 1/2 UDC: 543.541.3:546.791:546.799.4-5

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ACC NR: AP6014724

residue and the solution was again evaporated to dryness. Analytical results of the method are said to be completely satisfactory. Orig. art. has: none.

SUB CODE: 07/ SUBM DATE: 20Feb65/ ORIG REF: 002

ms
Card 2/2

VASHKOV, V.I.; SHNAYDER, Ye.V.; BRIKMAN, L.I.; ZAKOLODKINA, V.I.; CHUBKOVA, A.I.; ALIMBARASHVILI, TS.N.; BABAYANTS, G.A.; BERIANIDZE, I.Sh.; ZAKHAROV, P.V.; ISAAKYAN, A.G.; LEVIYEV, P.Ya.; MARTINSON, M.E.; MRACHKOVSKIY, S.K.; NAYDICH, N.L.; NESTERVODSKAYA, Ye.M.; RAZMANOVA, Ye.M.; SAVINA, K.V.; SERGEYEVA, A.Ye.; SOKOLOVA, M.Ye.; FOMICHEVA, V.S.; CHERNYSHOVA, V.A.; SHUMILOVA, T.V.

Sensitivity to DDT of houseflies in various climatic zones of the USSR. Zhur.mikrobiol., epid.i immun. 33 no.8:20-24 Ag '62.

(MIRA 15:10)

1. Iz TSentral'nogo nauchno-issledovatel'skogo dezinfektsionnogo instituta.

(FLIES—EXTERMINATION) (DDT)

VASHKOV, V.I.; SHNAYDER, Ye.V.; ZAKOLODKINA, V.I.; BRIKMAN, L.I.; CHUBKOVA, A.I.
ALIMBARASHVILI, TS.N.; BABAYANTS, G.A.; BERIANIDZE, I. Sh.;
ZAKHAROV, P.V.; ISAAKYAN, A.G.; LEVIYEV, P. Ya.; MARTINSON, M.E.;
MRACHKOVSKIY, S.K.; NAYDICH, N.L.; NESTERVODSKAYA, Ye.M.;
RAZMANOVA, Ye.M.; SAVINA, K.V.; SERGEYEVA, A.V.; SOKOLOVA, M.Ye.;
FOMICHEVA, V.S.; CHERNYSHEVA, V.A.; SHUMILOVA, T.V.

Sensitivity of houseflies to chlorophos prior to its use.
Zh. mikrobiol. 40 no.7:3-7 J1'63 (MIRA 17:1)

FOMICHEVA, V. M.:

FOMICHEVA, V. M.: "Pathological anatomy and some problems of the pathogenesis of fat embolism". Ivanovo, 1955. Ivanovo State Medical Inst. (Dissertation for the Degree of Candidate of Medical Sciences)

SO: Knizhnaya Letopis' No. 51, 10 December 1955

SOV/138-59-4-2/26

AUTHORS: Kartsev, V.N. and Pomicheva, V.N.

TITLE: Properties of Siloxane Rubber Vulcanisates Containing Vinyl Groups (SKTV). (Svoystva sulkanizatorov siloksanovykh kauchukov, soderzhashchikh vinil'nyye gruppy (SKTV))

PERIODICAL: Kauchuk i Rezina, 1959, Nr 4, pp 3-7 (USSR)

ABSTRACT: Dimethyl siloxane rubber and its vulcanisates are widely used in industry since they possess high thermal stability. In the Soviet Union siloxane rubbers containing vinyl groups were first manufactured in 1956. The present paper describes experiments on the vulcanisation capacity of rubbers containing 1 and 3 mol. % vinyl-ethyl siloxane chains in the dimethyl siloxane polymer chain (SKTV-1 and SKTV-3). Their properties are given in Table 1. This type of rubber can be vulcanised with sulphur in the presence of diphenyl guanidine (DFG), pentaldehyde diamine, cyclohexylethylamine salts of cyclohexyldithiocarbamic acid (Vulkatsit 774), dimethyl diphenyl thiuram disulphide (Vulkatsit 1), triethylene tetramine (TETA), and some aldehyde diamines and also with tetramethyl thiuram disulphide (Tiuram). Vulcanisation proceeded at 160°C in the presence of all the above-mentioned accelerators,

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Properties of Siloxane Rubber Vulcanisates Containing Vinyl Groups (SKTV)

except TETA. Using TETA as an accelerator vulcanisation could be carried out in thirty minutes at 140°C (Table 2). Mixtures of SKTV-3 could be vulcanised at a faster rate than SKTV-1 mixtures. Changes in the physico-mechanical properties of vulcanisates, depending on the period of vulcanisation when using thiuram and sulphur, are shown in Figure 1. Tests on the thermal stability of SKTV-3 and SKTV-1 at 175°, 200°, and 250°C showed that the thermal stability of SKTV-1, SKTV-3 and SKT rubbers was unsatisfactory (Figures 2 and 3). The SKTV-1 rubbers maintained their elasticity at 175°C for 50 days, at 200°C for 30 to 40 days and at 250°C for 4 days. Thick-walled 28 x 32 mm cylinders made from standard mixtures SKT and SKTV-1, and containing powdered silica gel, were also tested. In this case benzoyl peroxide was used as a vulcanisation accelerator. Vulcanisation was carried out for 15 minutes at 150°C. The vulcanised cylinders were subjected to further heat treatment (in a thermostat) for 6 hours at 200°C. The SKT vulcanisates had macro-pores, the SKTV-1 vulcanisate had a micro-porous structure (Figure 4). The vinyl groups in the siloxane polymer facilitate the vulcanisation of thick-walled rubber articles. It was also found that with an

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Properties of Siloxane Rubber Vulcanisates Containing Vinyl Groups
(SKTV)

increasing number of vinyl groups in the chain the frost resistance of the polymer increases (Table 3). The swelling resistance of siloxane rubber vulcanisates, due to various vulcanisation agents, is given in Table 4. The amount of residual deformation can be decreased by modifying the vulcanisation group and by increasing the time of processing in the thermostat (Table 5). Vinyl-containing siloxane SKTV rubbers are good insulating agents. The dielectric characteristics of vulcanisates SKTV-1 up to the time of swelling, and after swelling for 14 days in water, are given in Table 6. It is also possible to prepare vulcanisates from SKTV-1 by using channel black in the presence of sulphur and TETA. The strength of such vulcanisates, after vulcanisation for 60 minutes at 150°C, equalled 53kg/cm², and the relative elongation equalled 827%. Their thermal stability was unsatisfactory. The elastic properties of vulcanisates were considerably poorer when the period of ageing at 175°C and 150°C was reduced by 50%. There are 4 figures, 6 tables and 11 references, 9 of which are English and 2 Soviet.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy institut sinteticheskogo kauchuka im. S.V. Lebedeva (The S.V. Lebedev All-Union Card 3/3 Scientific-research Institute for Synthetic Rubber)

FOMICHEVA, V.M.

Pathomorphological changes in the gastric nervous system due to polypous and cancerous lesions. Sbor. nauch. trud. Ivan. gos. med. inst. no.25:92-95 '62. (MIRA 17:5)

1. Iz kafedry gistologii i embriologii (zav. - prof. Ye.A. Kirillov) Ivanovskogo gosudarstvennogo meditsinskogo instituta (rektor - dotsent Ya.M. Romanov).

FONICHEVA, Ye. V.

"Fracture of the External Nose." Cand Med Sci, Central Inst for the
Advanced Training of Physicians, Min Health USSR, Moscow, 1955.
(KL, No. 17, Apr 55)

SO: Sum. No. 704, 2 Nov 55 - Survey of Scientific and Technical Dissertations
Defended at USSR Higher Educational Institutions (16).

FOMICHEVA, Ye. U.,
DMITRIYEVA, V.S., kand.med.nauk; FOMICHEVA, Ye.U., kand.med.nauk

Work of the Maxillofacial Department of the Central Institute of
Traumatology and Orthopedics of the Ministry of Public Health of
the U.S.S.R. in 1954-1955. Stomatologiya 36 no.1:77-78 Ja-F '57.
(FACE--SURGERY) (MIRA 10:1)

FOMICHEVA, Ye.U., kand.med.nauk

Plastic surgery of the soft palate involving a pedicle flap from
the posterior pharyngeal wall. Stomatologiya 37 no.4:39-43 J1-Ag '58
(MIRA 11:9)

1. Iz chelyustno-litsevogo otdeleniya (zav. - prof. F.M. Khitrov)
TSentral'nogo instituta travmatologii i ortopedii (dir. prof. N.N.
Prirov).

(PALATE, CLEFT)

FOMICHEVA, Ye. U., kand. med. nauk

Changes in the nasal cavity and pharynx in congenital cleft palate
and their influence on the results of surgical treatment of the defect.
Stomatologiya 38 no.5:26-28 S-O '59. (MIRA 13:3)

1. Iz kafedry chelyustno-litsevoy khirurgii i stomatologii (zavedu-
yushchiy - prof. N.M. Mikhel'skon) Tsentral'nogo instituta usover-
shenstvovaniya vrachev (direktor M.D. Kovrigina).
(NASOPHARYNX) (PALATE, CLEFT)

FOMICHEVA, Ye.U., kand.med.nauk

Operative treatment of fractures of the mandible. Khirurgiia
no.9:69-72 '61. (MIRA 15:5)

1. Iz chelyustno-litseвого otdeleniya (zav. - prof. F.M. Khitrov)
TSentral'nogo instituta travmatologii i ortopedii (dir. - deyst-
vitel'nyy chlen AMN SSSR prof. N.N. Priorov [deceased]) Ministerstva
zdravookhraneniya SSSR.
(JAWS--FRACTURE)

EGOROV, Yp.F., kand. med. nauk

Host's surgery on the cervical portion of the esophagus using
Filatova graft. Radiologiya 40 no.9:87-89 S '64
(MIRA 1984)

1. Cheljustno-litsovaya anatomiya (av. prof. T.M. Koltsov)
Mosk. in-ta travmatologii i ortopedii (dir. -
korrespondent AKN SSSR prof. B.V. Volkov), i dr.

FOMICHEVA, Ye.U., kand. med. nauk

Results of surgical treatment of cicatricial stenosis of the
pharynx following burns by F.M. Khitrov's method. Vest. khir.
83 no.11:22-28 N '64. (MIRA 18:6)

1. Iz chelyustno-litsevogo otdeleniya (zav. - prof. F.M. Khitrov)
Tsentral'nogo instituta travmatologii i ortopedii.

POMICHEVA, Ye.Ye.

Fixing safety housings on sewing machine pulleys. Obm.tekh.opyt.
[MLP] no.36:37-38 '56. (MIRA 11:11)
(Sewing machines--Safety appliances)

FOMICHEVA, Ye.Ye.

Special knife for trimming elastics. Obm.tekh.opyt. [MLP] no.36:
38 '56. (MIRA 11:11)
(Hosiery industry--Equipment and supplies)

FOMICHOV, M.S.

Atomic energy in technology. Dos. such. fiz. no.5:131-144
'57. (MIRA 16:6)

(Nuclear engineering)

FOMIL', L., inzh.

Structural designs for technical piping at industrial enterprises with
standardization between branches of industry. Prom. stroi. i inzh. soor.
4 no.1:32-37 Ja-F '63. (MIRA 16:3)
(Pipelines—Buildings and structures)(Precast concrete construction)

FOMIN, A., dispatcher punkta sistemy posadki

Landing clearance. Grazhd.av. 17 no.10:4-6 0 '60. (MIRA 13:9)
(Ground controlled approach)

MAYEVSKIY, I.; POMIN, A.

Further improvement of methods in a national economic planning.

Vop. ekon. no.10:34-43 O '60.

(MIRA 13:9)

(Russia--Economic policy)

ANDEREG, Georgiy Fardinandovich; BARBANEL', Solomon Rafailovich;
FOMIN, A., red.; PEREGUDOVA, M., tekhn. red.

[Motion-picture theater equipment] Oborudovanie kino-
teatrov. Moskva, Iskusstvo, 1962. 483 p. (MIRA 16:4)
(Motion-picture theaters---Equipmnt and supplies)

MAYEVSKIY, I.; FOMIN, A.

Several problems of improving national economic planning.
Vop. ekon. no.12:38-45 D '62. (MIRA 16:1)

(Russia—Economic policy)

PANFILOV, Nikolay Dement'yevich; FOMIN, A., -red.; GORINA, V.,
tekhn. red.

[Sound in motion pictures] Zvuk v fil'me. Moskva, Iskusstvo,
1963. 117 p. (MIRA 16:9)
(Sound--Recording and reproducing)

FCMIN, A.


Dairying

Doubling the yeidl of milk from cows Kolkh. proizv. 12 No. 2, 1952

9. Monthly List of Russian Accessions, Library of Congress, June 1952, Uncl.

POMIN, A., rukovoditel' polstov.

Honor of workers of the traffic control service. Grazhd,av. 14
no.2:14-16 F '57. (MLRA 10:5)
(Airports--Traffic control)

FOMIN, A. 

Repairing battery cases. Avt. transp. 33 no.10:34 0.'55 (MIRA 9:1)
(Storage batteries)

FOMIN, A.; KLEYMENOV, I.

Refrigerator Cars

Kleymenov's all-metal constant temperature railroad car. Khol. tekhn. 29 No. 1, 1952.

Monthly List of Russian Accessions, Library of Congress, May 1952. UNCLASSIFIED

FOMIN, A. ~~II~~

DAVYDOV, Yu., kandidat tekhnicheskikh nauk; FOMIN, A., kandidat tekhnicheskikh nauk; SHEREMET'YEV, M., kandidat tekhnicheskikh nauk. [A]

Testing air conditioning systems in passenger cars with centralized power supply. Khol.tekh. 31 no.3:11-15 J1-S '54.(MLBA 7:9)
(Railroads--Cars--Heating and ventilation)

SOV/66-59-3-5/31

AUTHORS: N.II'ina, and Fomin, A., Engineers.

TITLE: Refrigerating Machines Operating on Freon-22

PERIODICAL: Kholodil'naya tekhnika, 1959, Nr 3, pp 21-25, (USSR)

ABSTRACT: Investigations conducted by the Central Designing Bureau of Refrigeration Machine Building and information from foreign manufacturing sources have shown that refrigerating machines operating on Freon-22 at a boiling point of -70° to -80° C should be of the two-step type. Odesskiy zavod imeni Stalina (Odessa Plant imeni Stalin) has started serial production of the first two-step refrigerating machine, the FDS-1, operating on Freon-22. In 1958 Moskovskiy zavod "Kompessor" (Moscow Plant "Compressor") produced the machine FDS-5. Both machines are intended for testing purposes with a temperature in the cold chamber of -60° to -70° C, operating at a boiling temperature of -50° to -80° C. The FDS-1 consists of 2 compressors driven by one electric motor, and of 2 heat exchangers, one gas and one liquid, and is equipped with an automatic control system. The capacity of the FDS-1 is 1,000 kcal-hr and that of the FDS-5 is 5,000 kcal/hr. The FDS-5 consists of 2 compressors with separate driving engines, a condenser with heat exchanger, a control device and an evaporator. Each compressor is equipped with an oil cooler. The article gives a complete list of

Card 1/2

Refrigerating Machines Operating on Freon-22

SOV/66-59-3-5/31

technical data pertaining to both types of compressors. In his conclusion the author concedes the high merits of the freon compressors, which however do not rule out the use of ammonia compressors, which in a capacity of 30,000 to 50,000 kcal/hr and at a boiling point of -50°C maintain their place in industrial installations, where toxicity does not enter into consideration; otherwise, as for instance in air conditioning installations the use of Freon-22 machines is appropriate. The same applies to laboratory and experimental installations requiring a refrigeration temperature of -70°C .

There are 1 photo, 4 graphs, 1 table and 1 diagram.

ASSOCIATION:

TsKB kholodil'nogo mashinostroyeniya (Central Designing Bureau of Refrigeration Machine Building) (N. Il'ina); Proyektnyy institut (Designing Institute) (A. Fomin.).

Card 2/2

BOYKO, V., kand.tekhn.nauk; FCMIN, A., inzh.

Changes in the quality of frozen meat during prolonged storage.
Khol.tekh. 37 no.1:37-38 Ja-F '60. (MIRA 13:5)
(Meat, Frozen--Storage)

BOYKO, V., kand.tekhn.nauk; FOMIN, A., inzh.

Decrease of the weight losses of frozen meat in prolonged storage.
Khol.tekh. 37 no.4:32-35 J1-Ag '60. (MIRA 13:11)
(Meat, Frozen--Storage)

BOL'SHAKOV, A.; FOMIN, A.

Investigating the moisture binding capacity of pork in brine
curing. Mias. ind. SSSR 33 no.4:56-59 '62. (MIRA 17:2)

1. Moskovskiy tekhnologicheskiy institut myasnoy i molochnoy
promyshlennosti.

NALETOV, N., prof.; BOL'SHAKOV, A., dotsent; SIMAKOV, V.; POMIN, A.

Histological changes in meat occurring during the various autolysis stages
in corning. Mias.ind. SSSR 33 [i.e.34] no.2:19-21 '63.
(MIRA 16:4)

1. Moskovskiy tekhnologicheskiy institut myasnoy i molochnoy
promyshlennosti.

(Meat, Salt--Testing).

FOMIN, A., inzh.

Repairing end plates of superchargers of the IAAZ-204 engine.
Avt.transp. 40 no.9:56 S '62. (MIRA 15:9)
(Motor vehicles--Engines--Superchargers)

AUTHOR: Fomin, A.A., Candidate of Technical Sciences, Docent
TITLE: A Nomogram for the Profitability of Special Machine Tool
Fixtures (Nomogramma dlya ekonomicheskogo obosnovaniya
primeneniya spetsial'nykh stanochnykh prispособleniy)
PERIODICAL: Vestnik Mashinostroyeniya, 1959³⁹, Nr 2, pp 74-75 (USSR)
ABSTRACT: On the basis of derivations by F.G.Petrov (Vestnik
Mashinostroyeniya, 1958, Nr 2) Eq (1), (2) and (3) give
the minimum number of components per annum to make a
given tooling cost profitable, the maximum allowable
cost of tooling and the annual cost factor for a given
fixture, respectively. A nomogram is reproduced to
simplify computations based on these formulae. Numerical
examples are given. There are 3 Soviet references.

Card 1/1

SIMONOV, Aleksandr Grigor'yevich; IOFIS, Ye.A., kand.tekhn.nauk, red.;
POMIN, A.A., red.; MALEK, Z.N., tekhn.red.

[Photography with artificial light] Fotografirovanie pri
iskusstvennom osveshchenii. Izd.2., ispr. i dop. Pod red.
M.A.Iofisa. Moskva, Gos.isd-vo "Iskusstvo," 1959. 126 p.
(Biblioteka fotolubitelis, no.8). (MIRA 13:9)
(Photography--Artificial light)

NOGIN, Pavel Alekseyevich; IOFIS, Ye.A., kand. tekhn. nauk, red.;
FOMIN, A.A., red.; SUSHKEVICH, V.I., tekhn. red.

[Photographic lenses] Fotograficheski ob"ektiv. Pod red. E.A.
Iofisa. Moskva, Gos.izd-vo "Iskusstvo," 1961. 124 p. (Biblio-
teka fotoliubitelia, no.22) (MIRA 15:2)
(Lenses, Photographic)

VENDROVSKIY, Karl Valerianovich; ZHUTOVSKIY, Boris Iosifovich;
IOFIS, Ye.A., kand. tekhn. nauk, red.; FOMIN, A.A., red.;
SUSHKEVICH, V.I., tekhn. red.

[For the amateur photographer-tourist] Fotoliubiteliu-
turistu. Pod red. E.A.Iofisa. Moskva, Gos. izd-vo "Iskusstvo,"
1961. 99 p. (Biblioteka fotoliubitelia, no.21)

(MIRA 15:3)

(Photography)

BUNIMOVICH, David Zakharovich; IOFIS, Ye.A., kand. tekhn. nauk, red.;
FOMIN, A.A., red.; MALEK, Z.N., tekhn. red.

[Selecting a camera] Vybór fotoapparata. Pod red. E.A. Iofisa.
Moskva, Izd-vo "Iskusstvo," 1962. 127 p. (Biblioteka foto-
liubitelia, no.28) (MIRA 16:2)

(Cameras)

ARTYUSHIN, L.F.; SHUBINA, G.Ye.; ANTONOV, S.M.; KIRILLOV, N.I.;
LEVITAN, A.Yu.; MIKOSHA, V.V.; FLUZHNIKOV, B.F.; IOFIS,
Ye.A., kand. tekhn.nauk, red.; FOMIN, A.A., red.; GORINA,
V.A., tekhn. red.

[Color photography] TSvetanaia fotografiia. Izd.2., ispr. 1
dop. Pod red. E.A.Iofisa. Moskva, Iskusstvo, 1961. 228 p.
(Biblioteka fotoliubitelia, no.13) (MIRA 16:5)
(Color photography)

LAVRENT'YEV, V.I.; PELL', V.G.; FOMIN, A.A., red.; PANKRATOVA, M.A.,
tekhn. red.

[High-speed motion-picture photography with the SKS-1 camera]
Skorostnaia kinos'emka kameroi SKS-1. Moskva, Izd-vo
"Iskusstvo," 1963. 221 p. (MIRA 16:10)
(Motion-picture photography, High-speed)
(Motion-picture cameras)

FOMIN, A.A.

Problem of dosage in the use of ionizing radiations for sterilization. Med.rad. no.9:74-80 '61. (MIRA 15:1)

1. Iz kafedry radiatsionnoy gigiyeny Tsentral'nogo instituta usovershenstvovaniya vrachey.
(RADIATION--DOSAGE) (RADIATION STERILIZATION)

FOMIN, A.A., aspirant

Change in the chemical indices of dietary fats under the action of ionizing radiations. Gig. i san. 27 no.3:34-39 Mr '62. (MI 1A 15:4)

1. Iz kafedry radiatsionnoy gigiyeny Tsentral'nogo instituta usovershenstvovaniya vrachey, Moskva.
(FAT) (RADIATION--PHYSIOLOGICAL EFFECT)

CZ/4-60-3-21/44

AUTHOR: Fomin, A.A.

TITLE: The Tasks of the All-Union Institute of Scientific and Technical Information in the Development of Soviet Science and Engineering.

PERIODICAL: Nová Technika, 1960, No. 3, pp. 131 - 133

ABSTRACT: This is an abridged translation of an article, originally published in a Soviet periodical, entitled in Russian "All-Union Institute of Scientific and Technical Information and Its Tasks". The number of Soviet scientific institutes is about 3,000, the number of scientists about 280,000. The All-Union Institute of Scientific and Technical Information (VINITI) at the State Scientific-Technical Committee of the Council of Ministers of the USSR and the AN USSR was established in 1952. Thirteen series of periodicals containing abstracts are published; 559,000 abstracts, 44,000 of which treated patents, were published in 1958. About 8,000 abstracts describing machines are published monthly; 12,250 foreign periodicals are abstracted. An express information service is engaged in publishing the most current scientific and technical news from abroad; 49 technical and scientific branches are treated. Monographies are also published on special

Card 1/2

CZ/4-60-3-21/44

The Tasks of the All-Union Institute of Scientific and Technical Information in the Development of Soviet Science and Engineering.

subjects. An independent translation department is attached to the VINITI. A team of about 20,000 experts is employed by the VINITI. Data on future publications, on technical equipment, like selectors, microphotographic reproductions etc, used by this Institute follow. There are 2 Soviet references.

Card 2/2

MICHAJLOW, A.I. [Mikhaylov, A.I.]; FOMIN, A.A.

Education of specialists for scientific and technical information
in the Soviet Union. Przegł techn 84 no.45:4 10 N '63.

1. Vsesoyuznyy institut nauchnoy i tekhnicheskey informatsii.

DORENSKIY, Leonid Mikhaylovich; IOFIS, Ye.A., kand.tekhn.nauk,red.;
FOMIN, A.A., red.; PEREGUDOVA, M.T., tekhn. red.

[Dynamism of the photographic image]Dinamichnost' fotokadra.
Pod red. E.A.Iofisa. Moskva, Izd-vo "Iskusstvo," 1962. 143 p.
illus. (Biblioteka fotoliubitelia, no.27) (MIRA 15:9)
(Photography of sports)

YAKOVLEV, Mikhail Fedorovich; IOFIS, Ye.A., kand. tekhn. nauk, red.;
FOMIN, A.A., red.; MALEK, Z.N., tekhn. red.

[Repair of cameras] Remont fotoapparatov. Pod red. E.A.Iofisa.
Moskva, Iskusstvo, 1962. 191 p. (Biblioteka fotoliubitelia,
no.29) (MIRA 15:10)

(Cameras—Maintenance and repair)

SAZHIN, Leonid Ivanovich; FOMIN, A.A., red.; REZNIK, A.L., tekhn.
red.

[Electric power supply of stationary motion-picture projectors]
Elektropitanie statsionarnykh kinoustanovok. Izd.2., perer. 1
dop. Moskva, "Iskusstvo," 1963. 282 p. (MIRA 17:3)

FOMIN, A.A., kand. tekhn.nauk; ACHERKAN, N.S., doktor tekhn.
nauk, prof., retsenzent; KASPEROVICH, N.S., inzh., red.

[Computation of the weight of parts and materials; atlas
of nomograms] Podschet vesa detalei i materialov; atlas
nomogramm. Moskva, Mashinostroenie, 1964. 115 p.
(MIRA 17:10)

FOMIN, A.A.; FEDOROV, N.A.; KASATKIN, Yu.N.

Quantitative determination of fatty acids by distributive
paper chromatography. Vop. med. khim. 9 no.1:76-79 Ja-F '63.
(MIRA 17:6)

1. Kafedra radiatsionnoy gigiyeny TSentral'nogo instituta
usovershenstvovaniya vrachey, Moskva.

DONSKOY, Aleksandr Vasil'yevich, dr. tekhn. nauk, prof.; FOMIN, Anatoliy
Andreyevich, inzh.

Calculation of parameters and pondermotive forces of a system
of turns inductively coupled with a sphere. Izv. vys. ucheb.
zav. elektromekh. 7 no. 4:511-514 '64 (MIRA 17:7)

1. Kafedra elektrooborudovaniya promyshlennosti predpriyatiy
Leningradskogo politekhnicheskogo instituta (for Donskoy)
2. Leningradskiy institut tokov vysokoy chastoty (for Fomin).

FOMIN, A.A.

Construction of a series of Dietz engines. Avt. 1. trakt. prom.
no.9:40-42 S '56. (MIRA 9:11)
(Germany, West--Automobiles--Engines)

FOMIN, A.A., kand.tekhn.nauk

Ways of developing tractor engines. Trakt.i sel'khozmasb. no.6:
1-4 Ja '59. (MIRA 12:9)

(Tractors--Engines)

1.1.1. A. . .; S. . .; Y. . .; S. . .

Performance indices for modern tractor diesel engines. Trakt. i sel'sk.
khoznash. no.7:3-8 J1 '69. (MIL 12:12)
(Diesel engines)

FOMIN, A.A.; STEPANOV, Ye.G.; SVETKOVSKIY, E.R.

Modification of SMD diesel engines for tractors. Trakt. i
sel'khoz mash. no. 11:6-9 N '59. (MIRA 13:3)

1. Nauchno-issledovatel'skiy avtotraktorny institut.
(Diesel engines)

FOMIN, A.A., kand.tekhn.nauk

Monogram for calculations in the specialization of classification yards. Zhel.dor.transp. 41 no.12:46-47 D '59.

(MIRA 13:4)

(Railroads--Hump yards)

SOKOLOV, Ippolit Vasil'yevich; KONOPL'EV, B.N., red.; FOMIN, A.A.,
red.; CHICHEVIN, A.N., tekhn.red.

[History of the invention of motion pictures] Istorii
izobretenii kinematografa. Pod obshchei red. B.N.Konopleva.
Moskva, Gos.izd-vo "Iskusstvo," 1960. 193 p.

(MIRA 14:4)

(Motion pictures)

KOMAROV, S.G.; KITOV, A.N., inzh.; DOROFEEV, V.G.; SHEREMET'YEV,
M.A.; FOMIN, A.A.; KOSAREV, A.A.; SARANTSEV, Yu.S., red.;
VERINA, G.P., tekhn.red.

[Handbook for the repair of passenger cars] Spravochnik po
remontu passazhirskikh vagonov. Moskva, Vses.izdatel'sko-
poligr.ob"edinenie M-va putei soobshcheniia, 1960. 631 p.
(MIRA 13:6)
(Railroads--Passenger cars--Maintenance and repair)

GORELOVA, Gertruda Isaakovna; REMIZOV, Viktor Ivanovich; UKHIN, Pavel Nikolayevich; FOMIN, A.A., red.; REZNIK, A.A., tekhn. red.

[Principles of radio engineering and radio-television systems] Osnovy radiotekhniki i kinoradioustanovki. Moskva, Izd-vo "Iskusstvo," 1963. 294 p. (MIRA 16:11)
(Radio) (Television)

FOMIN, A.A.; VISHNYAKOV, B.S.; PROKHOROV, V.P.; KHAYEV, V.M.;
SHVEDSKIY, A.I.; ORLIN, A.S., doktor tekhn. nauk, prof.,
retsenzent; VASIL'YEVA, N.G., inzh., red.

[Modern tractor diesel engines; atlas of designs] Sov-
remennye traktornye dizeli; atlas konstruktsii. Moskva,
Mashgis, 1963. 232 p. (MIRA 16:12)
(Tractors—Engines)

DOMIN: A.A.

A sphere in the field of a coil carrying current. Zhur.
tekh. fiz. 33 no.9:1021-1030 S '63. (MIRA 16:11)

GOLUB, V.S.; FOMIN, A.A.

Synchronizing device for recording pulses from a photomultiplier.
Prib. i tekhn. eksp. 10 no.1:217-218 Ja-F '65. (MIRA 18:7)

04707-65 EWT(1) IJP(c)

ACCESSION NR: AP501561A

UR/0057/65/035/006/0983/0989

AUTHOR: Fomin, A.A.

TITLE: A cylinder in the field of current-carrying conductors

JOURNAL: Zhurnal tekhnicheskoy fiziki, v.35, no.6, 1965, 983-989

TOPIC TAGS: magnetic field, alternating magnetic field, cylindrical
21

ABSTRACT: The author treats the problem of a cylinder of magnetic
in the field of a finite number of conductors parallel to
alternating magnetic field.

the and the force on the cylinder are calculated. The
are assumed to be infinitely thin in the radial direction
finite extension in azimuth. The results are obtained

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L 54767-65

ACCESSION NR: AP5015618

in the form of finite sums over the conductors of infinite Fourier series. In case the conductors are infinitely thin also in azimuth, the infinite series can be summed and the results obtained in closed form. There is considerable discussion of the conditions under which the effect of the finite azimuthal extent of the conductors is negligible. Orig.art.has: 41 formulas and 2 figures.

ASSOCIATION: none

SUBMITTED: 10Aug64

ENCL: 00

SUB CODE: EM

NR REF SOV: 003

OTHER: 001

Card 2/2

L 2308-66

ACCESSION NR: AP5020732

UR/0057/65/035/006/1438/1443

AUTHOR: Fomin, A. I.

31

TITLE: An infinite cylinder in the field of a coaxial system of turns

B

SOURCE: Zhurnal tekhnicheskoy fiziki, v. 35, no. 8, 1965, 1438-1443

TOPIC TAGS: electric inductance, induction furnace, skin effect, magnetic field

ABSTRACT: The author calculates the field within an infinitely long cylinder of given conductivity and permeability surrounded by a sequence of current-carrying rings centered on its axis. The author was motivated (at least in part) by the applicability of the calculations to induction heating of cylindrical parts. The field of the rings outside the cylinder is calculated with the aid of a tensor Green's function and the corresponding field within the cylinder is obtained in the form of an infinite series, each term of which is the integral of a product of Bessel and exponential functions. The self and mutual impedances of the rings are also expressed in terms of similar series. In deriving these series it was assumed that the rings are infinitely thin in the radial direction but of finite width in the axial direction. To evaluate the integrals occurring in the series

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Card

L 2308-66

ACCESSION NR: AP5020732

it is now assumed that the rings are narrow also in the axial direction. Other simplifying assumptions are discussed, and for the case of small skin depth and small gap between the current rings and the surface of the cylinder, the calculation of the terms of the series is reduced to the evaluation of tabulated functions. The inductances of several systems were measured and good agreement is shown with the calculated values. (Abstractor's note: No experimental details are given.) Orig. art. has: 42 formulas, 2 figures, and 1 table.

ASSOCIATION: none

SUBMITTED: 12Dec64

ENCL: 00

SUB CODE: EM

NR REF SOV: 002

OTHER: 002

Card

2/2 *nd*

L 06071-67 EWT(m) DJ

ACC NR: AP6018320 (N) SOURCE CODE: UR/0105/66/000/002/0012/0014

AUTHOR: Fomin, A. A. (Candidate of technical sciences; Leningrad)

32

ORG: none

B

TITLE: Theory of the electrodynamic bearing ¹²

SOURCE: Elektrichestvo, no. 2, 1966, 12-14

TOPIC TAGS: dry bearing, electrodynamic bearing, *ELECTRODYNAMICS*

ABSTRACT: The possibility of building an electrodynamic bearing ¹¹ is proven, and fundamental formulas describing such a bearing are deduced. A set of wires (bearing) produces a magnetic field describable by: $H(r) = H_0 \left(\frac{r}{R_0} \right)^n$. A non-ferromagnetic cylinder (shaft) is placed in this field. So long as the bearing and the shaft are aligned, the resulting force is zero. When an offset δ appears, the

Card 1/2

UDC: 538.3:621.822

L 06071-67

ACC NR: AP6018320

resulting force arises and tends to reduce δ . A solution of the differential equations describing the system yields relations among the force acting upon the shaft, the offset δ , and the field exponent n . The final formulas show that the shaft should be a good electrical conductor, that the supply frequency should not be too high, and that the skin effect should be pronounced. Orig. art. has: 1 figure and 40 formulas.

SUB CODE: 09 / SUBM DATE: 16Nov64 / ORIG REF: 007

Card 2/2 *egk*

L 21754-00

ACC NR: APG004897

SOURCE CODE: UR/0057/66/035/001/0186/0190

AUTHOR: Fomin, A.A.

ORG: Nona

TITLE: Polyphase cylindrical inductor with a multipole field

SOURCE: Zhurnal tekhnicheskoy fiziki, v. 36, no. 1, 1966, 186-190

TOPIC TAGS: magnetic field, alternating magnetic field, magnetic trap, polyphase system, electric inductance, electric conductor

ABSTRACT: The author calculates the magnetic field produced within a circular cylinder by a system of conductors parallel to the axis and equally spaced on the surface of the cylinder carrying equal currents with a constant phase difference between the currents in successive conductors. The calculation is based on an expression for the vector potential previously given by the author (ZhTF, 35, No. 6, 1958) and the result is expressed as a Fourier series in the azimuth. If the space outside the cylinder is filled with a ferromagnetic material with infinite permeability the field strength within the cylinder is doubled. If d is the phase difference between the currents in successive conductors and there are a total of N conductors in all, the number of phases is $\beta = 2\pi/d$, the number of pole pairs is $p = N/\beta$, and the field near the axis is proportional to r^p , where r is the distance from the axis. This rapid increase of

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ACC NR: AP6004897

field strength with distance from the axis is advantageous for the design of electrodynamic supports, electromagnetic crucibles, and magnetic traps. For fixed N , p is maximum when $\beta = 2$, and a two-phase system is recommended for the design of electrodynamic supports. Orig. art. has: 22 formulas, 1 figure, and 1 table.

SUB CODE: 20/

SUDM DATE: 01Mar65/

ORIG REF: 003/

OTH REF: 000

Card 2/2